

SEQUENCE LISTING

<110> RUSSELL, James A.
WALLEY, Keith R.

<120> TOLL-LIKE RECEPTOR 2 (TLR-2) HAPLOTYPES PREDICT OUTCOME OF PATIENTS

<130> RUSSELL-4

<140> 10/591,224
<141> 2006-08-31

<150> PCT/CA2005/000357
<151> 2005-03-04

<150> US 60/549,560
<151> 2004-03-04

<160> 2

<170> PatentIn version 3.3

<210> 1
<211> 401
<212> DNA
<213> Homo sapiens

<400> 1
ccccaaatTTT aaaagagggc aagaaaagag agacaataga acataaaaca aatgggacaa 60
gaataaagta catagtTgtc acagtccctt gggTgctgct gtaacaaaat acctgagact 120
gggtaattta caaagaacag aaatttatcc attcatgggt ctggagTctg ggaagtccaa 180
gattgaaggg ctgcatctgg wgagggTcat ctggctacat tataacatga tggaaagcat 240
cacatggTga gagagagcaa gagaggacag aacttacttt tataacaaac tcattctcac 300
aataaactgc tcccttggtg ataacattaa tccatttatg agggTacagc cttcataacc 360
taatcacctc ttaaaagggt ccacctctca gctcgcatg a 401

<210> 2
<211> 33164
<212> DNA
<213> Homo sapiens

<220>
<221> Unsure
<222> (12165)..(12165)
<223> n is a, c, g, or t

<220>
<221> Unsure
<222> (12207)..(12306)
<223> n is a, c, g, or t

<220>
<221> Unsure
<222> (24073)..(24172)
<223> n is a, c, g, or t

<400> 2

tgactctgtt	attaagattt	ttaccaaaga	gcaactgtag	ctatggtggc	ctgacttgaa	60
gggacagacc	aaacaaacaa	caaaacacaa	aacaaaacaa	acaaacaaca	aaagcaagag	120
cagaaactat	tggaaaatga	tttattcacc	aatatTTTtaa	aggTtcttcc	tgttctaagc	180
aaggaacatc	tttaagttct	ttataatgta	cccatTTTtac	atttacaAAA	actgccagaa	240
gttgacagca	tgtTTTtggg	gtttctaagc	tatcagttaa	TTTTTtggg	tacagTTTTa	300
ttgataaact	aacagagtag	aaaaaatcta	atggaatacc	cccaaTTTta	aaagagggca	360
agaaaagaga	gacaatagaa	cataaaacaa	atgggacaag	aataaagtac	atagttgtca	420
cagtcccttg	ggtgctgctg	taacaaaata	cctgagactg	ggtaattttac	aaagaacaga	480
aatttatcca	ttcatggttc	tggagtctgg	gaagtccaag	attgaagggc	tgcatctggw	540
gagggtcatc	tggctacatt	ataacatgat	ggaaagcatc	acatggtgag	agagagcaag	600
agaggacaga	acttactttt	ataacaaact	cattctcaca	ataaactgct	cccttggtga	660
taacattaat	ccatttatga	gggtacagcc	ttcataacct	aatcacctct	taaaaggttc	720
cacctctcag	ctcgcagtga	gccgagatca	tgccactgca	ctccagcctg	ggtgacagag	780
cgagactctg	tctcaaaaca	aacaaacaaa	caaaaattcc	acctctcaac	actgttgcac	840
tgaagatgaa	atttccaata	catgagcttt	ggggcacaca	ttcaaaccat	agcaatagtt	900
caattacttt	aaagcccaaa	atgtcagtaa	ttatatTTaa	tgcaattTTa	tacatcagta	960
actaaatgag	atagactaaa	TTTTatgata	atcagactaa	tattatcaga	ctagacttca	1020
aaacaaccca	acaatcatat	gctgTTTtaca	agagacacat	ttatggatac	taaaagggtat	1080
aaagtgaaca	gatgcaacca	TTtatcaaaa	gaaagctggt	gtggcaatat	tactattaga	1140
caaaatagaa	ttaggaaaaa	aatcataact	gtagataaac	gtttcactaa	gttaaagggtt	1200
tcactgagaa	gaaataaaaa	TTTTgaattt	ataagtactt	ataacaacat	taagaaacta	1260
gaaaatagaa	aaagaataga	gccaaaattg	actgaactag	aaaaatagaa	aattcataga	1320
aaaatccaca	atcatagtgg	gagattTTtat	catacatctc	tcagtaactg	atagaaaaac	1380
cagacaaaaa	tcaataagga	taaagaaaat	gcgaacacaa	tgtagtTcac	ataaggaacc	1440
tatactactt	ccaacagcag	ctgaaatcac	agagcatact	taaaatctga	ccatatactg	1500

gctcatagag taaattgcaa tacatthtttaa agaattthaaa tcatacagaa tatgtcttct	1560
gaccataatg caattaaagt agaaaagaac agaaaaactt atagaaaatt ctcatatatt	1620
tggaattag taaatttcta aataacccat ggggtcaaaaa ataatacagaa tgaaaatcag	1680
aaaatatttt taatgactta tgaaaaaaat tacatataaa aacttgctcag atgcacctaa	1740
actattgctt aaaggaaact tacaacctta agtgcatata ttagaaatga agagtgcga	1800
aaaatgaatg agcaagcaaa taccttaaaa actggaaaag gaatagtaaa ataaatccag	1860
agaaatcaga acaggggaaa taataatata agaatagaaa ttaatgtgct agaaaatagg	1920
ggatctatca agtcagaagt tgattttttg aaaatgctaa taaaatgat gaacctctgg	1980
caagacaata aaagctggta caaataactc atctaaggaa taaaattgag gacctctctt	2040
ttgttaaattg acataagcag gaggccatta tcctgagact gtctctacac tttgagttct	2100
tacataataa actgcaacct aatttagtat actacataaa caaactgaaa cctaacttag	2160
gagtcttttt ttttgtaatt aatagctaaa tttccaccaa atcataaata gccaaagcttt	2220
agccaatcac aggcagccaa ctgatcagac tatgccccaa caaggtaaatt gcctattaca	2280
ccatacccaa ataaggcaga ctcttagctg aagccaatca ggtgattact atgctcttgt	2340
gtttggccta taaaagctca ctgctcacac tgttggatgc tctctgaaac ttttgtgaat	2400
ctgagtgtg cctgattcat gaatcattct ttgctaaaat aaactctgtc aaatttaatt	2460
tgtctgaagt ttctctttta acagtgtttg gtgttgcaag caggatccaa aggagacct	2520
tagtgactcc caggagacct atagtgactc ccaggagctc ttagtgacca agtgaaggta	2580
cctgtggggc tcattgtgcc cattgtctct tcaactgcttt caactggtag ttgtgggtaa	2640
gttcctgctc agacttgagc actatacatt tgcattttca gctctctgac tttatttgag	2700
caattctttg atggattggc tccagaattg gattggattc agtgaagaaa ctgaaactgg	2760
actggtgctc taggaggcct caagtagata aggttactag aagacaggga atcctgggct	2820
tatctggatt taaggagtct acaactccat ctgcaactcc agccgatttc atttataaga	2880
attatggacc aagaacctgt gcttttctag agaaatgtgt gagccttact aaaggtaact	2940
tagaattaca atggactgcc gagaccagct cggtcgtgga gaccctaacc ccagcagcgc	3000
tagaggaatc aaagacacac acacagaaat gtagagtgtg gagtgggaaa tcaggggact	3060
cacagccttc agagctgaga gccctaaca gagatttacc cacatattta ctgacagcaa	3120
gccagtgata agcattatcg ctatagatta tagattaact aaaagtattc cttacaggaa	3180

acaaagggat	gggccgaaac	aaagggatag	gctctggcta	gatgtctgca	gcaggaacac	3240
gtccttaagg	cacagattgc	tcatgctatt	gttgtggctt	aggaacacgt	taagcggttt	3300
tctgccctgg	gtgggccagg	tgttccttgc	cctcattcca	gtaaaccac	aaccttcagc	3360
gtgggcgtca	tggctgtcac	aaacatgtca	cagtgtcgca	gagattttgt	ttatggccaa	3420
atctggggct	agtttatggc	caggtttggg	agcctgttcc	cacatgtccc	ccttttttgt	3480
tttgcaaagc	aataaaagca	aaggcagctt	tgtcacagtg	agctacttct	tgcaggagtc	3540
gggattcgca	tatgcatact	atacaaagac	aaacaacaca	gattaaaagc	ccaaccatca	3600
ttgaaatcac	agagcttcca	agtgtcttta	tctattttta	tgggttaatc	actgctaatc	3660
tgtctgcagc	tccttcaagc	actccagttc	ctggcattaa	ggtctggtgt	gcctggaatg	3720
ctttaaatat	ttgttctttt	aatattgcaa	tatggaaaga	caagtttgta	gagtgtcttc	3780
taggtgcttt	tttattcttt	cctgaatttg	gtcttattta	agagccatta	atagtttcca	3840
caaatcctta	tgttttagctc	ctacagcggg	ccatatcatt	tgagggtgag	gtgccactat	3900
accatcatgt	ttccagataa	taggaactct	tgccatattt	cttgctattt	ctaccatctg	3960
accattttgt	ttagaccagc	taaacatagt	gtggccatgg	cacgcagact	gagaggtgca	4020
atttaagcta	aacatcccct	taggggacca	atcaataatg	attccatagg	aatcactgcg	4080
cagcacctct	gcctattctg	caatgcaatc	ttcccaaaca	agtatgttca	ttatttctgg	4140
ccagggtcaa	ttctgtttac	aaataggttt	ttgagggcaa	tatgcctcaa	ttatagaaac	4200
agattttatta	tggtaaatac	tgagatcaga	aagcatgtgt	aactgtgtca	tagaatgatt	4260
acatccaggc	attattgcca	gccaagattg	ataaatatgc	ccaataagta	taattgttct	4320
ctgtgttagc	ccttgttgaa	ggaatactaa	tggcaatggt	gatcactgct	atcatagcta	4380
tcattaaatt	actcattgtg	actggttgtc	ccactttcct	caggttttct	tccaccctct	4440
atggcagttt	cttgatctgt	ccccaggtag	atggctgtgt	ttgatggttg	ttgctcgtga	4500
tagtttgggt	cctcctcagc	atcagtctcg	acatggctgc	aaccagaggg	tcctcgggat	4560
cctcccagaa	tctcttcctt	ggcatctggc	tcatgataag	gtttcagggtg	tcttgatggt	4620
atccaaatca	gctattgatt	ctggcctgga	gaaacacaag	cataacctct	acccaagt	4680
attattttac	ctatttccca	actttttgtt	gtcagatctc	tgcaccaagc	cagttgttct	4740
gcttctgttt	ttgcagctgg	tttctgtaga	tgctcttcag	ctgctgatag	catctggcct	4800
ttaggcaggc	tcaaaaaatt	taaagtcatt	aatgctagat	tcagttgtat	atgggtgtcc	4860
tgtaatccct	gtttcccctt	tttgcttttg	caactgctgt	ttcagggaga	gattcattct	4920

ttctacaatg gtttgtcctt gagaattata tgggatgccca gtaatgtgtt taatattcca	4980
tatagagaaa aatgtagcta gagcttggct agtatagcct ggggcattat ctgttttaac	5040
agaagttgga attcctatca ccacaaaaca ctgcaaaagg tgatgcttaa cacatgcagt	5100
ctcctgattg gcatgtagcc cagacaaagt gagaaaaggt gtccacacat acatgtacat	5160
aagctagtct cccaaacgag ggaacgtgtg acatccattt gctaaagata attaggttcc	5220
aatcctcgag gattaactcc tcctgttaaa gatgaggaat gcaccatttg gcaagttggg	5280
catcactgga taatagcttt agcttctttc caggtagctgt tataatctgca tttgagacca	5340
gaggcattaa catgggttaa attgtgaaag tgtctagcat tagatattgc agtagcaact	5400
aggcgatcag ccatttgatt cccttcagtt aaaggtcctg gaagaggtgt atgagcccta	5460
atgtgagtga tgtaaaaagg gtgcattcta ctctaaatg ctgtttgcaa ttgggtaaat	5520
aaagtcatca gttgttcata tgtatgaagt cataactgag cattttcaat taattgtatg	5580
gaatgaacca cataggaaga atcagaaatc acattaatag gcatatcaaa agcagtcaat	5640
acctcaatta cagctaaagc tccacttttt gagctgaagt atagggcgtg tgaaaaactt	5700
taccttttga tccagaataa gaggttttac cattacaaga cccatctgta aaaacattct	5760
cagcaccttc agttggttta aatttagtta ttttggggag aatccaatta gttaatttca	5820
aaaattgaaa taatttcatt ttaggaaaat gattatcaag aataccaca aagtcagcta	5880
aatgggtttg ccaagtaaga ctatttatag aagcttgctg tatttgtgcc tttgtgagag	5940
ggacaataat ttttccagga tcatatccat gtaatttaac aatccgaatt ctccatttc	6000
ttatcatcgt agccatttga tccaaataag gagttagagt ctgtgaatta gtatgtggaa	6060
gaaaaagcca ctgtacaaag tcttgctctt atacaataac accagtaagt gaatgctgag	6120
ttggaaaaat tagcaaactc agggctcttt ttggatctat tctatttatt tgagatttat	6180
ggatttgctt tttgattagc tgcagctctg cctcagcttc ttttgttaat tgctgagggc	6240
taatgagact aggatctcct ctaaggatag aaaatagatt actcagggca taggtgggaa	6300
tgccatagagc aggtcatatc cgattaatgt cccctagtaa tttttgaaag tcatttaatg	6360
ttttcaattg atccctacgt atagttactt tctgtggcac aatggtagtg tcatttacta	6420
aggtcccaa gtaggagtaa ggagtagtag tctgaatttt gtcaggagct atataattaa	6480
actggcatga gaaatcgagt tttgcaagt atcataacat tggagtaata tttcttgagt	6540
gggggcagca caaagtatat tatccatata atgaataatg taacactgtg aaaatttttt	6600

acgagtaggt tcaattgctt gcccttcata agtctggcaa atttttgaac tgtttcacat	6660
gccttgtagc aacactttcc aatacaaatg ctttagtatg ctgcaggttt tttactgcag	6720
gaattgtaaa tgcaaacagt tcacagcctt gctcagctaa ggggatagta aagaaacagt	6780
cttttaaatt tatgactatt aaaggccaat tttttggaat catagcagaa gaaggcagtc	6840
ccggctgcaa tgtccccata ggttgataa ctgaattaat ggctcttaag tcagttaaca	6900
ttctgcattt acctgatttt ttcttaatta caaaaactgg agaattccaa ggggaaaatg	6960
ttgagctatg tgtccttttt ctaattgttc agcaactaag tcctctaaag cctccagttt	7020
ctctttactc agcagccatt gtgctatcca aattggctta tctgttaacc attttaaagg	7080
tatataggtt ctggaggctt aacaatggcc accatcaaaa atgatatcct aaaccttggt	7140
gggaactttg tctttccgct tgaagcattt ccttcaaagc ttgcaaattt tttcctagtc	7200
ccataccagg gacatacccc atttcatgca tcatatgttg actttgaggg ctgtataatt	7260
attctggaat tagaacttgt gatccccatt gttgtaataa atctcttccc tataaattta	7320
taggtacaga agttataatt ttttgatatag tcccaggttg tccattgggc ccttcacaat	7380
gcaaaatata actactttga tatactttta gggctttacc aactccaact atgttaaatt	7440
gagcaggttg aattgaccat gcagatggcc agtgctgtac agaaatgatt gaaatgtccg	7500
ctcctgtatc taccaaactt ttaaatttct ttccctgaat agttatttca ccagtaggat	7560
gtttatcagt aatttgattc acccaataag ctgctttgcc ttgtttattt gtgcttccaa	7620
atcttctgt tcatttaatt tcacttttcc ccatttccac atatggcata atcaggagct	7680
gtgctatatg ctctcctggc tctgctttcc agggaacaga agtagatata acaatttgaa	7740
tttccccctt gtaatctgaa tcaatgactc ctgtttgtac ttgcacgcct tttaaattta	7800
aactagacct acctagaagt aatcctacca tccccgctgg catcatctga ctggagacag	7860
caaccttctt taacagtccc attacaaaag gagaacctgt tccatatgga ttaatagctt	7920
gtttaaattc tttgagtaat ttaaaaggaa aaggctcaaa tgtagctata atatttcctt	7980
gttgatctac ggggtatatt ctaacaggga actgctaagc ctctatatca ccctctcttc	8040
taacttgctg aattcctggc tgaatagaac tgagagtggc cgctcgaggt gctgctcagt	8100
cactggggcg actacttttt gccagtgctc ctctggaaaa gaaagatctg gaggatcagg	8160
ctactctttt gcttcgaaat aatgaggggg tgcagaaggg tagggacaaa cctctccctc	8220
ctttgccact ttagcttttag ctggcaaaca aacctgctct gtcacctctt ctgttacttc	8280
attatacttt ccttctcct catcttttagt gtgaaaaggt tccaaggtgg aatgagctag	8340

agccacact	tgccattgt	taccctgatg	cttccgagct	ccccttctta	ctcaccatgg	8400
ggattgctta	agagtactcg	ggtatcctcc	agctttgttc	cacgttttcc	aaccattgct	8460
ccagcgagcc	ttcatcctgg	gtttgagtcc	ccacgttggg	cgccacttgc	cgagaccagc	8520
tcggtcgtgg	agaccctaac	ccagcagtgc	tagaggaatt	aaagacacac	acacagaaac	8580
atagagtgtg	gagtgggaaa	tcaggggatt	cacagccttc	agagctgaga	gccctgaaca	8640
gagatttacc	cacgtattta	ttgacagcaa	gccggtgata	agcattattt	ctgtagatta	8700
tagattaact	aaaagtattc	cttacaggaa	acaaagggat	gggccaaaac	aaagcgatgg	8760
gctctggcta	gatatctgca	gcaggaacac	gtccttaagg	cacagatcgc	tcatgctatt	8820
gtttgtggct	taggaatgcc	ttaagtgggt	ttccatcttg	ggtggaccag	gtgttccttg	8880
ccctcattcc	agtaaaccga	caaccttcag	tgtgggcgtc	atggccatca	caaacatgtc	8940
acagtgctgc	agagattttg	tttatggcaa	gatctggggc	cagtttatgg	ccagatttga	9000
gggcctgttc	ccaacagtgg	acaaagaaga	aaagctgctt	aaggcaaaca	ggcacatatt	9060
ttttaagct	acaatagcta	gacaaactaa	gagaatcctg	tgtatgtttt	acttttgtat	9120
ttttattttt	aatatattgtg	gatacatagt	agatgtatat	atztatgggg	cacttgagat	9180
attttgatac	aggcatacaa	tggataataa	taacatcacg	gtaaaagggg	tatccattac	9240
ctcaagcatt	tatcctttct	ttgtgttata	aacaatccaa	ttaaaccttt	tatcataaaa	9300
tgtacaataa	tgttgactgt	ggtcaccctg	ttttgctatc	aaagaataaa	tcttattcat	9360
tttatctaag	tatatattgtg	taccatttaa	ccatcccagt	ccccctgctc	ctccaactac	9420
acttcccagc	ctctgttaac	catcattcta	ctctcttata	tccatgagtt	caattgtttt	9480
aatttgtagc	tcccacaaat	aagcgagAAC	atgggatgtt	tgtctttctg	tgccttattt	9540
cacttaacat	aatatcctcc	agttccatcc	atgttggttat	atgacagaat	ttcattcttt	9600
cttatggctg	aatagtaccc	cattgtatat	atataccaca	ttttctttat	ccattcatgt	9660
gtaggtggac	acttggattg	cttctagatc	ttggctactg	tgaatagtgc	agcactaaac	9720
atgggcgtgc	agatatctcc	ttgatataatt	gatttccttt	attttgggta	tatacctagc	9780
agtgggattg	ctggattgtg	tggtagctct	actgttagtc	ttttgaggaa	cctccaaatt	9840
gttctccata	gtggttgtac	taatttacat	tcccaaccaa	caacagtgtg	cagggttctg	9900
ttttctccac	atccttgcag	catttttatt	gcctgtcttt	tggataaaag	ccattttaac	9960
tggggtgaaa	tgatatctca	ttgtagtttt	gattagcatt	tctctgatga	tcattgatgt	10020

tgagcacctt	tttatatatc	tgtttgccat	tcatgtgcct	tcttttgaga	aatgtctatt	10080
tagatctttt	gcccatthaa	aaaattggat	tattagattt	ttttcctatt	gagttatttg	10140
atctccttat	atattctggt	tattaatccc	ctttcaaagt	gatagtttgt	gaatattttc	10200
tcccattctg	tgtattgcct	ctgcactttg	ttgattattt	aatttgctat	gcagaaactt	10260
tttaacttga	tgtgatccct	tttgctcatt	tttgctttgg	ttgcctatgc	ttgtggggta	10320
tgacttaaga	aatctttgcc	cagaccaatg	tcatggagag	ttttcttaat	gttttctttt	10380
aatagtttca	tagtttgatg	tcttagattt	aagtctthaa	tctattttgt	ttttattttt	10440
gtatatggca	agatataggg	gtctagtttc	ttccgcatat	ggatatctac	ttttcccagt	10500
accatttggt	gaagagactg	tcctttctgc	aatgtatggt	cttgacactt	ttattgaaaa	10560
tgaattcact	gtagatgtgt	ggatttggtt	ctgggttctc	tattctgttc	tgttgttctg	10620
tgtgtctggt	tttatgccag	taccattctg	ttttagttac	tatagctctg	tagtataatt	10680
ttaagtcaga	taatgtgatt	cctccagttt	tgttcttttt	gctcagaata	gctctggcta	10740
ttctgggtct	tttgtggttt	catgtaaatt	ttaggattat	atthttattaa	catatttctg	10800
tgaagaatgt	cattggtatt	ttgataggaa	ctgcattaaa	tctatagatt	gctttgggta	10860
gtaaggatat	tttaacaata	ttgatttttc	caatccatga	acatggaata	tctttccatt	10920
ttttggtgtc	ctctttaatt	tcttgcatca	gtgtttatag	tgtttctttc	atcagtgttt	10980
atagttttca	ttgtagagat	cttttactcc	tttgattaag	tttattcctg	ggtatthttat	11040
ttgtagctgt	tgtagacgag	attactatct	tgatttcttt	ttcagattgt	tcactgttgg	11100
catatacaaa	tgctactgat	ttttgtatgt	tgattttgta	tactacaatt	tcactgaatt	11160
tgcttattac	agagagacta	aagatagtta	gggccattac	caaagtgtgt	ttctgtcaca	11220
ttgaaaaatt	ataccatgag	aaggcacatg	cttctagtaa	ttacagttca	tagatatgtc	11280
aatgtacaga	atgctggtgt	gacagttcac	aattgtttgc	tttatagttt	tcactggaaa	11340
ttaaattact	aagggttaaag	taatcccagc	actgtgggaa	gctgaggcag	gatgattgct	11400
taatgccagg	agtttgagac	cagctggggc	aatgtagcat	gagcccatct	acaaaaaaaa	11460
aaaggaattc	taattaatat	gtggtactag	aattaccaga	aataataagg	gaaacaactc	11520
ggaaaagaag	gtaagatgtg	ttttgggtaa	gaacagctat	aaagtatgag	gggatgtttt	11580
gttttggtta	ggaaaaaata	aaataatatt	tgtcctaaag	tagaatgcct	ggttggttaag	11640
acaatgagaa	agagaaagag	tatagaagaa	aaactgaatg	gatataagaa	agttgtagaa	11700
ggttgtggga	taggaatcct	ggaaagggaa	ttttatatgt	gatcaaacta	agatttgaag	11760

aaaattctaa	gttttttttt	aaaaaaattg	agcatgaata	tcaaaaacat	actgacacag	11820
aactagaaat	ttgtcctcta	tgttaaaaca	acaaggtttt	cttggagtat	tggtctgctc	11880
ttaataagaa	attgaaagac	ttttctttac	ctgctaagta	attggcctag	gaaatgaaga	11940
ttctgtgttt	tattgagata	atattattgtg	cttcatgttg	tctttattag	atctttgact	12000
gcctcagaga	cctgagttca	ccttattaaa	agagaaagag	tttctacaat	tatgtggctt	12060
tctttatttg	cctttgaagt	cttttaccaa	tcactctagt	taaatgaata	aatattgttt	12120
catagggacc	tgtgatccta	ttttaatcag	atattttaaa	ccttntgata	tttttgactt	12180
ctcaaaatca	aattctaaat	taaaacnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	12240
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	12300
nnnnnnggcc	ttcatctata	agtttttctt	tacccttttg	gtgggcccc	tcagcccagc	12360
tttttttttt	tttaaaggac	agggctctcac	tctgttgctc	aggctggagt	gcagcagcac	12420
aattttggct	cactgcagac	tcaacctcca	gggctcgagt	aatcctccca	cctcagcctc	12480
ccaagtagct	gggatcaca	gaatgtgcca	ccacaccag	ctaattcctt	atctcttata	12540
gagacagagt	cttactatat	tgcctaggct	ggtctcaa	tcctgggctc	aagtgatctt	12600
cccacctcag	cctctgagta	gctaggacta	caggcatgca	ccaccatact	cggctaattt	12660
ttgtattctt	actgtagaga	catggggctt	cactttgttg	cctagggttg	tcttgaactc	12720
ctgggctcga	gtgattctcc	tgccttggcc	tcccaaagtg	ctgggattac	aggcttgagc	12780
tatgtgcca	acctcctttg	attttttgtt	tttcttctgt	ttgctttact	cataggaaaa	12840
aacatatata	tttataaatc	ctgattcaaa	gactactttt	gtgtgagggg	attgagtttg	12900
cttttttttc	tcctttcatc	taggtcatgt	ggcctttggg	agatatgtgt	gtgtgtgagg	12960
ggtaggatgt	gtgtttaatt	ttttaaattt	atattttggg	gctgtatgtt	gtgaaagatt	13020
tgctcatagt	ggatcaatga	accatctttt	ctaggcagtt	ttgttgaaaa	tgaaggtttc	13080
tctttgat	caagaatgac	caaattaaaa	aacaaaaaca	aggtattaat	tttctattgc	13140
taccataaaa	aattctcaca	aacttagtgg	cttaaaacaa	cacaaactta	gttttgtata	13200
tcagaaatct	gacacctatc	tccctgggct	aaaatcaagc	tgtggcaggg	ctgcattcct	13260
ttctggaggc	tctagggggc	agtctgtttc	tgtcctggcc	ttttctagct	cctagaggcc	13320
atccacattc	cttggcttgt	ggcctcttcc	tctgttgtca	gagccaggaa	cgcagcatct	13380
ccctgacctt	tcttccatct	cacatccttt	tctctgacca	cagctgggaa	aggttcactt	13440

attttaagga	ctcctgtgat	tagactgggc	ccatcttaag	gttcttaatt	taatcacata	13500
ttttattatg	tagagtcaca	tattcagggg	ttccaggtat	taggatgtgg	acccctttgg	13560
ggcaggaatt	ataattctgc	ctattacaaa	tgatgtaaga	gcatatacag	tacagtgttt	13620
aaaatagtaa	tgagttggaa	ataaatgttc	caaaacagga	aaatacttaa	gttatagaac	13680
aaacaaatgt	tggagtacta	ggaagcctct	aaaaatcatt	gtaagagaat	aacataggcg	13740
atgaaagaag	tagaatacaa	agttttataaa	cagtgtgatc	ctgtactgca	tgtgggggtg	13800
ggtgatgccc	cactgggtgt	gtagaatttt	gagtgatttt	cattttcttt	ttttttttat	13860
ctttcttttc	tggggagggg	gggtactgtc	tgctgtaagc	atgtgttact	actatcacat	13920
ccatctcccc	caaaactttt	aattaaatct	taagggaag	tgtattttat	ttaatagtgg	13980
taaaaagtaa	gtatcttaaa	agcaaagtct	aaagtctga	taaaatgtac	attatactat	14040
aaaaggacat	aatctaaagg	caaaggcaaa	gggaaacttt	cagtaagcat	tcctaataag	14100
aagacctata	aatgaggta	tgtagtaatt	acttgggctg	ggattaaagg	gacataagaa	14160
tgtctttaca	tacaagtata	gccaatatac	aaaatgcaca	acagtctagt	taccattaat	14220
caaaatggtg	ggcaagtact	ataaaagtca	ccattaaaat	acagccttat	taaaatacat	14280
atatttatgg	aaacgaaaac	tgacatttca	aaataattat	ttctgtgtgc	cctagacatt	14340
tgagcaattt	aatacttctg	ctggagtaca	gagaggaagt	cagtaagatg	gaatgtattt	14400
ggattttcaag	cagttatttt	taaaggaaag	ctattacttt	agaaactaaa	agcaaaacag	14460
aaaacaaaaa	ctttaaccag	tatcctttca	tctagctaata	tagatgtttg	ttcatttact	14520
atagatatag	aattttattt	aaacctcaaa	atgattgaag	taacagactc	agcactgtga	14580
ctttgggatt	gagtaggcta	taagagtggg	gtgaaatatg	accattcatt	ctataattca	14640
atattaaaac	aaattcctgc	aaccaaagaa	atagtagtac	tgggttaggc	caggttccca	14700
agttcattgt	gtattctaga	tctatagtgc	taataaagag	aagacaataa	cttgtttgcc	14760
taccttattt	cattgttaaa	aaaaatcact	aggtcaaaat	aatgggtcaa	gttgttgatt	14820
gaaaaaccca	gaattgcttt	tgtatttgct	gggataagct	agatgtctta	gttcattttg	14880
tgctgctata	acagaatacc	acagactgac	taacttctaa	aaaacagaaa	ttttcttgca	14940
gttctggaga	ctgagaagtc	caagatcaag	gcactctcat	ctggtgaggg	ccttcttgct	15000
gtctcatcac	atggcagaag	gcagaagggc	aagagcacia	gagagagaac	ccattccaga	15060
gagtgccttt	cataatggca	ttaatctatt	cttaagggcg	gagccctcat	ggcctaaaca	15120
cctccatta	gacctactt	cccagtgtg	ttgcatttg	gattcagtct	ctaacacatg	15180

aatatctggg	agacacattc	aaactatggc	actaggttat	gctgtagtaa	caacttattc	15240
ccttaacagg	cacagatgat	ggtccagggc	aactgtcccc	tggtgtgaat	cagcaattca	15300
ggtcacttga	ctcttgtgac	tgtggcatca	cagggagaca	agaggtctcc	ctgttttcaa	15360
ctacagcaga	aagcacgagg	agtatgcagc	ccacctattc	tatgcttggc	ccagtgggtga	15420
tacacagtac	ctctcttctg	cttacagcac	attggcctga	aatggctcgtg	tggtcccact	15480
caagggggaa	ggaggctggg	aaatggaagc	ttctatgtgt	cctgaaaaga	aattataggc	15540
atactgctga	gtgctactta	tgtttaaaca	cacctataca	atthttggaga	agctttcctt	15600
tattttttat	ccagttggaa	agactctggt	ctctaaactt	cagagctgca	ggtaggacct	15660
ggctctcatt	ctagagaaaag	tagctctgca	gtcccagcag	aaagaagcct	gacttgaagc	15720
tccaccactt	tggtatctg	ttgggtgttc	ttcaaaagtg	agtgccaatt	cactgtagta	15780
cccggcactt	ggtcttccat	gctttcatta	ttagggaaac	tagatttgta	gcacagctac	15840
tgagaggtac	taggatccta	gtaagctggc	tttaciaaaca	tggtgtgtac	tgctattttt	15900
tgctttttatt	tcagagaaaa	taaaacgtaa	gataatagga	aaaatacat	gtgaactgct	15960
ggacggctat	tcaaaaatag	tttgccagag	taactggtaa	gcctgaaatc	tgtgtagcca	16020
tgaaagggct	catcatcggc	ttaattctga	agcaaaactt	ggtgaaacac	gtggtgggtta	16080
tcttgagggt	aaaatgctgg	cttcccagtg	ggaagtgaac	gtgtcaatca	ggttgtgttg	16140
ggagatgtga	taaaggctga	ggcagtcttg	cagctcatga	ttttatgcag	gggctaagat	16200
gagaaggatg	ttcaaaaaaa	ccaggggatg	ttattctagc	ttttgagcat	gagacagcct	16260
caaagcactg	ggaaagctgg	atgctagcag	gagggcagtag	aaatgcaagt	gtgagaaaaa	16320
taaaggctgg	gctggcgtgc	tggcaggaaa	tggattcgaa	aggcaggtct	gataaatgtt	16380
tcagaaaaag	agagctgtca	ggatgaggta	gagtgagctt	ggcagcctgg	gagttggcat	16440
gccattgatg	gtcaagacca	aatgctgttt	ctcctatcca	gccagaaatt	ttgctttaaa	16500
aatgacacta	gggctttgct	ctcaacaacc	actgtcctct	ctctcattct	ccctctcact	16560
gggttacctc	ctccttgtca	gtgacttctt	ctgtgatact	gactcttcca	tccatcatgg	16620
gttttttctc	tgatttttaa	gaataagtgg	aaattcctat	attgtttgtt	ctttcaattg	16680
tagaaaaat	tgaaaaccaa	aaggaaataa	tttaaaaaca	ctgtaattgc	actacgaaga	16740
agcacttagt	ttggtatata	gccatgtgtt	gcttaatggg	ggggatatat	tttgagaaat	16800
gttttattag	gtgacttcat	cactgtacag	atatcataga	gtacttacac	aaaccagat	16860

tgtatagctg	actacacacc	tgtgatatat	ggtatagctg	agtgctccta	gtctgcaaac	16920
ctgtatagca	tgttactgta	ctgaataagg	caggaaattg	taacacaatg	ggaatcattt	16980
gtttatttaa	atatatcaaa	acataaaaag	gtacagtaaa	aatgcaatat	aaaagataaa	17040
aaatggtagg	taccctgtga	gggcacctac	catgaataga	gcttgcagga	ctggaagttg	17100
ctctgggtga	gtcagtgagt	ggtaaatgga	tgtgaaggcc	taggacacgg	ctgcacacta	17160
ctgtacaatt	cgtaagcact	acacttaggc	acactaaatt	tataaaaaat	atttttcttt	17220
aataggaaat	taaacttagc	ttactgtaat	ttgttacttt	atgaactttt	taacttttaa	17280
caacttttag	attgttttta	agcaacattt	agcttaaaac	acaaactcac	gtacagctgg	17340
acaaaaatat	tttcttttta	aatatcctta	ctctataagc	ttttttcatt	aaaaaattat	17400
ttttactttt	aatttttttt	tgttaaaaac	aaagacacaa	atatacacat	tagcctgggt	17460
ctacacaggg	tcaggatcat	caatatcact	gtcttccacc	tccacatctt	atcctgctcg	17520
aaggtgttca	ggggcaataa	cacgcacgga	gctgtcatct	cctatgataa	cagtgccttc	17580
ttctggagta	cctcctcaag	gaactgcctg	aggctatttt	agagttaact	taaaaaaaaat	17640
aagtaggagt	acactctaac	aataaaaagt	atgtaaatac	ataaaccag	taatagtcta	17700
ttatgattaa	gtgttatgta	ctatacataa	atatatatgc	tatactattg	taagactggc	17760
agtgcagtag	gattgtttac	gtacagcgtc	accacaaaca	tgagcaatgc	attgtgctac	17820
aacgttctga	tggctatgac	atcattaggt	gataggaatt	tttcagtttt	gttatgatct	17880
tatggaacaa	ctgttgtatc	tgtggtccat	tgttggccaa	agtgtcatca	ggagttgcat	17940
gactgtatct	ccttccagac	ttgtgtttat	gtgtgtgctt	ttacaaaaat	ggaatatata	18000
cactattcta	ggaactcctt	ttctcattta	atattctgtg	aaaagctaga	cttattttatg	18060
aatgcttatg	agatgtttta	ctggcatttc	acactcaatg	tgacaacacc	atccttatca	18120
tttctaacct	atacctcatt	tttttcattt	ttcatttcat	taactttttc	aacatctttt	18180
gagcccacag	taggggtcta	accacttgat	aattgtctta	gtttattttc	tgttgctata	18240
acagaatacc	atggactggg	tagtttataa	agaaaagaag	tttatttagc	tcatggttct	18300
ggaggctagg	aagtccaaga	gcatggcacc	accggcatct	agtgtgggtc	gtcccatggc	18360
agaagcgggg	aaggacagaa	ggtggaagca	agtgcacaag	acagagagaa	aattgggtaa	18420
aattcatcct	ttttataagg	cgcccactcc	tgtgataact	aaccactttt	atgataatga	18480
cattaattca	ttaatccata	taatcacctc	ttaaagttcc	cacctctcaa	cactgttaca	18540
atggggatta	agttttcaac	acaaattttt	gggaggacac	attcaaacca	tagcaatggg	18600

taaaattaag	ctcagatact	ctcttttttc	cctacccttc	tcatatttaa	ttgtctcaaa	18660
atcactcatt	cattcaataa	atattttttt	catctgtcct	tacatggcct	gtgtgcagcc	18720
tgtgccctca	tgattttctc	attcagtgaa	attgagcacc	tactatgtgc	cagactttgt	18780
ttttggctct	gggcatacca	aagtgaacca	aatggggaag	gtaccttcta	tcatggtgct	18840
agtattctag	agggggaata	aataatacat	caatatatta	gctatccatt	attgcgtagc	18900
aaattacccc	aaaacttagt	gacttacaat	aatgacattt	actattttac	tgtgtttgtg	18960
ggttaggagt	tggggcatgc	tttagcaggt	cctctgcttc	agggtctctc	acaggccgca	19020
ctcatctcaa	ggctcaacta	ggggagaatt	ggctttcaaa	gtcattcatg	tggttggttg	19080
caggattcca	tttcttgctg	tgttggctac	aggctactgc	caatcctggc	cacatgcacc	19140
tctctgttag	ggcagctcac	aatagggcag	cttgcttcat	cagagtaagc	aagcaagcaa	19200
gagccagaga	gagagagaga	acgagagggg	gagtgccggg	aaaacaagag	tcatggtcct	19260
ttatgaccaa	tcttgaagtg	acatcccatc	actataccat	atcctatttg	ttaggaacaa	19320
gtccctaggt	ggccattga	aggggagggg	gttacacagg	gtttgaatac	caggaaatgg	19380
ggatcattgt	gagccgtttt	agaaggctgc	ctcccacagt	caagaaacaa	gacaattcca	19440
gatcactctc	agtgctagag	agaaaatagg	acagggataa	gacgaagagc	atctgggagt	19500
gttggggagg	tagtcttcat	tgagtgttta	gagaggacct	cactgaggag	ataacagtga	19560
agcagagaac	taaagggcaa	gaaagggccc	acccggaaag	attcaagcct	tccagacaga	19620
ggaaacagaa	aaggcaaagt	ggcagaatga	gctctgcctg	tttgaggaag	aggggtggagc	19680
ccagtgacat	ggagtgaatg	agcacgaagg	aagtgggcgc	ctgctgagat	gaggcccggg	19740
taatgagtac	atgaagtga	tagtgtctgt	gttttgaaat	actgagtaac	ttccctatgt	19800
cacagcttgt	aagtgcaca	gcacacacaa	ggatttgaac	ccgagtccat	ctgatgctaa	19860
aatccatgtt	tttgccacac	tagtgccttg	cagaatttac	tagaagggga	tgctgctggg	19920
tggtggtcag	ccactccagg	tgctcatgat	gtaagtaaga	ctttcagggc	taaaaccagg	19980
atagtcttga	ggaaattggg	atagctggtc	accacaaga	cacgacagga	acactgagtt	20040
ctctgatgtg	atatgaaacc	caggatgagc	cggcagccct	gagtcagcct	gatgagaagt	20100
cggctgtgcc	ttttgttacc	aagaaaacaa	aactgtagca	taaccccacc	ttgttgttaa	20160
aacaaaatgt	ttacattctt	ctgttctgct	tcgctcaagt	cattcctgtg	ggacaagccg	20220
acctaacata	caggtgtagt	caggggctag	gagagacct	ggcaggccct	tgtccattct	20280

cagtcactga	agtgagacct	agggactcag	gaaggactca	gagttccctt	agtcatcatt	20340
ccctctgggc	atcctgcttt	tggcataatt	actgatacga	gcacctcgtg	tcccctcctg	20400
aattatacct	acccccccgc	ctccccgccc	cctgcaattg	cttagcacag	tatctggccc	20460
atggaagtga	cttcatggaa	attcagcgga	tgaatgactg	gacaatgaac	aacgcacagc	20520
aatgtgtggt	gtgacagaaa	aggctgcacc	agcaaaaatt	ggaagctgat	ctttgggtat	20580
ttccttgctt	tggtcacttt	gcaatttcct	gggtgcttga	aacaggaagt	cagtgactct	20640
aagccccctg	gggatctggc	acctcacatc	aaggatatctg	gaaagtcctt	attcttcact	20700
tctccatgcg	atcctaccct	acagaccagc	cctccttttg	gaatctctcc	tgctacacat	20760
tctgtgaccc	tgggactctc	tcttatttta	tttattttatt	tttatatgcc	cgtgtttcca	20820
aaggaataat	agggcagtta	aatatagcta	tgactgtgcc	tttccagagc	ccagaaaagt	20880
ctggaaaact	gggaatatcc	aaagctcagg	atgatattgc	gcacacaaaa	agtactaggc	20940
agagtagtgt	ttagatagaa	acagagtaat	gtttagatag	aaagcagact	cagtcatata	21000
aaatatatgc	atatacagca	tgatctgcat	ttctgtgatg	cttctgaagt	acagaagcat	21060
tcagcacttc	agtaactctt	attgcaagtt	acctcttcaa	tcatttttct	tcaatcatta	21120
aaatgcttta	aaaaattttt	tagcttattg	aggtatgact	gacaaaaatt	ttaatataatt	21180
taaagtgtac	aacttgtttt	gatatatgta	tacattgtga	aatgattacc	acaatcaagc	21240
taataaacat	gtccattatc	tcacgttaca	ttgtgtgaga	acacttaaga	tctactctta	21300
gcaaatacca	agtattttcg	gtatatcaag	tatgcaatat	attattacta	tacactcacc	21360
atgctgtaca	ttagagcttc	agaacttatt	tatcttataa	ctgaaagttt	gtaccctttg	21420
accaatgtcc	ccatttccac	cattcctagt	gaccactggt	ctactctggt	tttatgagtc	21480
tggctttttt	tagattccac	atgtaagtga	gattatacag	tatttgtctt	tctgtgactg	21540
gcttatttta	cttagcataa	tgtcctgctg	gttcatccat	gttggtgcaa	atggcaagat	21600
ttccttattt	ttttaaggct	gaatactatt	tcattgtgta	gtatacacca	catttcttta	21660
tccattcatt	cattgatgga	cacttacggt	gattccaaat	tttggctatt	gtgaataatg	21720
ctgcaataaa	cataggagtg	tagacagctc	tttgacatat	tgatttcatt	ttccctgggt	21780
atatgcctag	aagagggatt	gctggatcat	atggtgggtc	tggttttaat	attttgagga	21840
aactccatat	tgttttctat	gatggctata	ccaatttaca	ttcccgccaa	taatgtataa	21900
cagttccctt	tctccacatc	cttgccaaca	cttatctttt	ggcttttttg	tactagccat	21960
cctaacaggt	atgaggtgat	gttttattgt	ggttttgatt	tgcatttccc	tgatgattag	22020

tgatgtagag	cacatTTTTa	tatgcctggt	ggccatTTTT	atgtcttctt	tgggaaaata	22080
tctattcaga	ttatTTTccc	actTTaaatc	cagttatttg	TTTTTTtgct	attgaattga	22140
atTTTTtatg	tatTTTggat	agtaaccctt	tattatatat	aaggTTTaca	aatTTTctcc	22200
cattctatag	gttctTTTTt	tctTTatTTt	actataaagt	ttaaaatctt	gtTTTaattt	22260
ttgtgggtac	atagtaggtg	tatatattta	tgagggtgtg	gagatgtttt	gatacaggca	22320
aattgtgtca	cagaaaatcc	cctcaagcat	ttatctTTTg	tcttatgata	caattaaact	22380
cttagttatt	ttaaaatgta	caattaaatt	atcgactata	gtcaccctgc	tgtactatca	22440
aatagtcggt	cttattcatt	ctttctaact	atTTTTtggg	taccatttaa	ccatacccat	22500
cccccgct	cccccttacc	cacctctata	ggttctTTTT	atTTTgttaa	TTTTTTtct	22560
ttgctgtgca	gaataaaatg	ctTTTTcaaa	gcaagTTaaa	gctgctctct	acttagatta	22620
agaaatcaac	ttaaagtatt	atatatatat	atatatatat	atatattaaa	aaaaaaaaga	22680
aaacatctga	agtggctcca	gcagaaggaa	aggcaagatg	ggaatcaaag	tttaatctac	22740
attctTTctg	cttctccttt	tctaccaaca	ctgtgttcaa	ctgcataaca	atagtaccaa	22800
tgagcacgag	aaagatagtt	tttagtttaa	agactatTTc	agTTTTagtc	agactacttc	22860
agacctcaga	ctccagactt	cagactccag	actTTtagaca	acagactcca	catgccacac	22920
aacagacttt	cagactccag	cttcagactc	cagactccag	atcgcacact	tcagacaaca	22980
gactctagac	aacacactcc	agtctccaca	ttccacacga	cagactacag	actccacact	23040
ccagacaaca	gactccacac	tccagacaag	agactccaca	atccagacaa	gagactccac	23100
actccagaca	acaggagact	tttagactcc	agatcagact	tcgaacttca	gattcactcc	23160
agacttcaga	ctccagacca	gacttcagac	tccagacca	gatttcagat	tttagacttc	23220
agactccaga	ccagatttca	tatttcagac	tccagaccag	acttctgact	tcagacttca	23280
gactcctgac	cctggatttc	agactccagg	cttcagagtt	tggactttgg	actacttcag	23340
ctttagtcag	acagacaact	tcagtcacac	cactTTTcac	ctctgccatc	taatctcgtc	23400
TTTTgaacaa	ccccctaaaa	aggtaacatt	ccaagaaaac	ccagaccag	aaacactgaa	23460
tgacatactc	aagactaccc	aactagtaag	ggggaggcca	cagTTTccct	taccctggca	23520
acatgcacat	ggcaggccct	tcacttagct	ggtagaagga	acacaggctt	gggaaggaga	23580
tgtctgatgt	tcactccctg	acgacactct	tacttgcttc	aatgatctct	ctgagccttg	23640
ggtggcccat	ctgctaaaca	aggatgagtt	atTTcctggg	gatgctaaga	gacttctgcc	23700

tcatgcctgc	agtgctgctc	atgttgcccc	cttggaatta	cttgttcaac	ttctttcttc	23760
cccactagac	tgtgagcttc	ttcaggtcaa	agaccaggac	tttcttgcca	ttaaccccag	23820
caactagcat	catgcctgac	caaagggcat	gctgatgaca	ataaacattg	attgtccgaa	23880
atcacatgcc	tggtccccag	taggcgcttg	ctggttactg	ctttcttccc	atcctccctc	23940
tgccaccctt	tcctctctga	gtctggaggg	gatggccatg	tactagccag	gggcagtgtc	24000
cacaggaaat	tcaggtcctt	tgcagcagtc	agtttcattt	cctatgatta	aaatttctgt	24060
gaaacatatt	atnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	24120
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nngggtatgt	24180
tattaatatg	tgcttcaaaa	attatatgaa	attcttagaa	accagatagt	cgtggtataa	24240
tactatcagc	caaaattcta	attatcgtga	aatattatgt	gttgcagaag	taatacaatt	24300
tccttatgaa	tggcattatt	gtgaactctc	atcatatctt	taaccaagtc	cattttaagc	24360
tttgtcatct	acaaagagtc	acttgtttta	ctctgggtact	ttccggaaca	ctgtgaaaaa	24420
caattatata	aagggtgtgg	acctataaga	caaacaacca	aacaaaaatc	gtaaagtgtt	24480
cttttaaaag	attcgtggaa	aggactctga	taagtacagg	tttctgataa	ctttaagatc	24540
atactactgg	actgggtaag	aatttccaga	actctagcaa	agaagtggat	tggttcataa	24600
aactgccaac	ccaacatgaa	gcagaataag	aattaattga	ataccaggga	aatgctttgg	24660
cagattttca	tgctaagtca	gccagtactg	aaattgttaa	gatatgcaat	ttgaaagaac	24720
actataatat	tcatctgaat	caaattatct	atgataacct	atttaaataa	acagcatcat	24780
gcacctgaat	tgagagaaaca	aaactgatat	ttaaaatgat	ataaatttag	tgttaaattgt	24840
ggcctcatgg	atcagacagc	tatctggtcc	tttctgagtc	catatagctg	ccattattaa	24900
aagttctgca	ctctatgact	catcacagaa	tagataacgt	gaaattatga	aaaaatattg	24960
gtgttatgac	tgttctaaaa	ttgctaaaat	ggcttataat	caatgtttgg	tttgtcaaatt	25020
ccacaatttt	tataagataa	taaaaacctc	agttggtaca	tttccaccat	ccactggact	25080
atttgaacat	ttacagatgg	attgcattca	gttgccatcat	tggaatctg	caggaaactt	25140
aagtaaatgc	tggaatatgtc	atgttgaacc	aaatactaata	atgcttttaa	agatcttcta	25200
attcacccta	tagcagattt	cactgatatt	ccaagtgtga	ctacctgttc	aaattgcaca	25260
tctggtcttt	ctataggggt	aggctttttg	agtcacatat	tcagatttca	tgtttaagc	25320
taacagtaga	caaaacatat	aggagaggct	ttacagttaa	attattccag	aaactgaata	25380
ataaaaccaa	aaggagagat	aattagacag	tttgtagacg	aattcataac	cctaattctc	25440

taattgttgg	tagcctccat	tgatgataat	taatagtgga	gccttagata	aataactacta	25500
ttgcttcccc	gttgatgacc	cctgtagcac	acagtgtccc	acaggggaact	gtctcttgtg	25560
cccctctagc	atatatTTTT	atctatgaag	gattttaacta	tcaatcatag	gcacaggcaa	25620
ctccatgtcc	cagtcagtag	gaaataagaa	gtcagtgtgg	attagggatt	ctaacagtac	25680
cactgtcact	ccataaccaa	ctgaaaattt	gacattgttc	tatacctctt	aatttgcact	25740
atggtataaa	aaggaacttt	ctagcaggta	cgaatccctc	taaatgggca	tcttttgttc	25800
aaatgctcct	tccctggcct	ggaataaatg	taaatgaggt	tatgattaga	aatccccttc	25860
aaacattagc	tactacagct	cactctactg	caaaggctat	atagttgccc	agtgaagttc	25920
tctaaattct	cttgctaaag	tttcttttaa	taacaggatt	gccttgaact	atctgttggt	25980
ttgtagtggg	gcagggggtg	tgatagggga	cactgtgtat	aatagcta	acatcctact	26040
gcacttgc	aaaggaatct	gttataaaga	aaatgaaata	aaggtataaa	agttggcaag	26100
aagaaaacca	tcattatgtc	ttgaggatga	ttggggatac	agaaaatgag	aagaatccac	26160
aaactattag	aattactaag	ttaatttagc	aaggttgctc	aatgcatgg	cagtatacaa	26220
aatttaattg	aatttctaca	tatatgtata	tgccatattg	tgtttagattg	ttttgcattg	26280
ctataaggg	atacctgaag	ctgggtaatt	tataaagaaa	agaggcttat	ttggctcatg	26340
gttctgcagg	ctgtacaagc	atggcactag	catctgtttg	accttaggaa	gcctttactc	26400
atggtggaag	aagggggagc	aggcatgtca	tatagtgaga	gagggagtga	gagggaggg	26460
gcaagagtga	agggggaggt	cccagactct	ttttaaataa	cctgaaatcc	tgtgaacaga	26520
gtgaaaacta	acttattacc	atgaagagca	caccaagcca	ttcatgaggg	gtataccttc	26580
atgacccaaa	cgctttccac	caggtcctac	cttcaacact	ggggatcaca	tttcaacatg	26640
agatttggag	aggacaaaca	tccaaatcat	atcacatata	taaatatgta	aaactatttt	26700
aaatgttttt	aaagtatcga	atagaaataa	atctcacaaa	atatgcttaa	gaactttaag	26760
caaaaaccat	aaaatactat	tgtgataagt	taaagaagac	ctaaataaat	ggagagatct	26820
gtcatgtctc	tggattggaa	gattcaatac	tgtaatgata	tgaatagttc	ccaaattggt	26880
ctatagattc	aaaacattgc	cagttaaaat	ctcagtggac	tttgtttttt	tgaaactgac	26940
aagctgattc	tgccatttat	aataatatcc	aaaggggcaa	gaataaccaa	gacacatttg	27000
aagaagaaca	aggaggaaga	agaacgtatt	tgaagaagaa	taaggaactc	tattaagtgt	27060
atatctccta	tatattgaga	tacacatttg	aaatacatct	atcacctaga	tattgagata	27120

tattatacat	ttaatatagt	gtgttgctgg	tatagggata	gacaaatgaa	cattgggatca	27180
gaatagcact	gaaacaagat	ctacccttat	atgggcatgt	ccctattaac	aaaaaaatat	27240
tggtgattat	ttcctcaaga	tgatctgtaa	aaaacaagtt	aattgaacat	ccatatggga	27300
aaaaagtgaa	tccttctgct	acctcaaata	tcaaccccag	gtagattata	gatctaaaag	27360
tgaaaggcaa	agcaataaag	attttagaaa	ataacaaaga	gaatatcttt	atgaaaatac	27420
aggaaatatt	ttaaaaatag	gctagaaaac	tcactattaa	aatatataaa	atataagaac	27480
atctgttcat	caaaagtact	atagtttgaa	tagcagtgtc	tcctccaaaa	ttcatattga	27540
aacttaatcc	ccattgtaac	agtactaatc	ctaaaactaa	gtattaagag	gtgtgacctg	27600
tggaagtga	ctaagtcatg	aggggtcttt	cctcaggtat	gggattagca	tccttataaa	27660
aggccttgag	atggaatgta	gtgccccctt	gccctcttgc	gttctcccat	gtgaggacac	27720
agcaacaagg	caccatcttg	gaaggagaga	gaagccctca	ccagacaaca	gtgcacatgc	27780
cttgatctta	gacttcccag	cctccagagc	tataataaat	acatttctgt	tctttataaa	27840
ttacttggtc	tctggtatth	tgttacagaa	gcactaatgg	actaagacaa	aaagattcca	27900
ttatgaaagt	gaaaaggcaa	ccgcagagtg	gcagaagctt	ttggagatga	tgaatatgth	27960
tacttctctg	attgcggtga	tgataccatg	agtgtataca	tatgtgtgta	tacataatgt	28020
atacaaattg	tgttcattga	ttatgtacag	tttctttgta	taccaattat	accttaataa	28080
agctaaggaa	aaaaaaaaaga	aaatccagaa	taaatatgca	tggtatgacc	cattttattta	28140
aaaaaaaaaa	gagggaatgc	gaagcagtgg	ttttggtgcg	aacacaaaaa	ttctggcttc	28200
aacagcattt	aaattcccaa	accaagcatg	tttgtgtttt	aattctttgt	ggccataaat	28260
tgtacagctc	aggcctttat	agtctctcag	attctgtgaa	tgtggggaat	tagttttact	28320
cataaaaagt	tttgttcttg	gggataaatt	ttttaaaaaa	atthttgtat	agtttagcaca	28380
ctgagaaaaat	acagacaaaag	gcatacagat	gcaagaaatg	aggtagctga	atagacaaaa	28440
gaatgatata	gggcccagaa	ggtaggcaaa	gagaaagttg	ttgggtttat	ggttacaagt	28500
aaactagcag	ttgtggtgca	gatagthttta	tttcccccac	attaatctga	acagcccatc	28560
cagacttaaa	cactgctttt	tgcatthtact	tctaggcagg	aagacagggg	tctgatggtg	28620
tgagtctcct	tcaactcagc	aaaccacctt	ggtctgcctc	gagthttccaa	caccctcct	28680
gctgctagt	gatagggtg	aggcaggttg	atgaacatgg	aactthtttc	ttttggtccc	28740
aaagcatgct	actcctggag	tttcattcag	tgaatgagaa	ctatagthttg	gttctgtgag	28800
atctctatga	atcaaggcgg	ccactgaagc	ggagaaaaga	aatgcttaaa	tgthtaagaaa	28860

gtttgaagtg	cagaaaaagg	tgattgtaaa	tccatatggt	taagcttagc	ccatttctta	28920
aaaggcttga	ttgctcattc	ctccattcat	tgatttactc	actcttccaa	tccatgttat	28980
tgagtcttgc	tctgtaattc	cggatgggtg	tgcttttaag	tactgcatag	tggttgtatg	29040
tctgtgttag	cattgctgaa	tgtatcaggg	aattcatttt	tttatcccca	cacactcatt	29100
cgttccacac	atatgtgtgt	gtctctctct	ctctctctct	ctctgtgtgt	gtgtgtgtgt	29160
gtgtgtgtgt	gtgtgtgtgt	gtgtgtgtta	tgccatagaaa	acatttctca	agaattagaa	29220
ttacgatatg	ctgtcaaaca	caatgactta	tttgaacctc	ttttatttgt	aggttgaagc	29280
actggacaat	gccacatact	ttgtggatgg	tgtgggtctt	gggggtcatc	atcagcctct	29340
ccaaggaaga	atcctccaat	caggcttctc	tgtcttgtga	ccgcaatggt	atctgcaagg	29400
gcagctcagg	atctttaaac	tccattccct	cagggctcac	agaagctgta	aaaagccttg	29460
acctgtccaa	caacaggatc	acctacatta	gcaacagtga	cctacagagg	tgtgtgaacc	29520
tccaggctct	ggtgctgaca	tccaatggaa	ttaacacaat	agaggaagat	tctttttctt	29580
ccctgggcag	tcttgaacat	ttagacttat	cctataatta	cttatctaata	ttatcgtctt	29640
cctggttcaa	gcccccttct	tctttaacat	tcttaaactt	actgggaaat	ccttacaaaa	29700
ccctagggga	aacatctctt	ttttctcatc	tcacaaaatt	gcaaatcctg	agagtgggaa	29760
atatggacac	cttcactaag	attcaaagaa	aagattttgc	tggaacttacc	ttccttgagg	29820
aacttgagat	tgatgcttca	gatctacaga	gctatgagcc	aaaaagtttg	aagtcaattc	29880
agaatgtaag	tcattctgatc	cttcatatga	agcagcatat	tttactgctg	gagatttttg	29940
tagatgttac	aagttccgtg	gaatgtttgg	aactgcgaga	tactgatttg	gacactttcc	30000
atttttcaga	actatccact	ggtgaaacaa	attcattgat	taaaaagttt	acatttagaa	30060
atgtgaaaaat	caccgatgaa	agtttgtttc	aggttatgaa	acttttgaat	cagatttctg	30120
gattgttaga	attagagttt	gatgactgta	cccttaatgg	agttggtaat	tttagagcat	30180
ctgataatga	cagagttata	gatccaggta	aagtggaaac	gttaacaatc	cggaggctgc	30240
atattccaag	gttttactta	ttttatgatc	tgagcacttt	atattcactt	acagaaagag	30300
ttaaaagaat	cacagtagaa	aacagtaaag	tttttctggt	tccttgttta	ctttcacaaac	30360
atttaaaatc	attagaatac	ttggatctca	gtgaaaattt	gatggttgaa	gaataactga	30420
aaaattcagc	ctgtgaggat	gcctggccct	ctctacaaac	tttaatttta	aggcaaaatc	30480
atttggcatc	attggaaaaa	accggagaga	ctttgctcac	tctgaaaaac	ttgactaaca	30540

ttgatatcag	taagaatagt	tttcatttcta	tgccctgaaac	ttgtcagtgg	ccagaaaaga	30600
tgaaatattt	gaacttatcc	agcacacgaa	tacacagtgt	aacaggctgc	attcccaaga	30660
cactggaaat	tttagatggt	agcaacaaca	atctcaattt	attttctttg	aatttgccgc	30720
aactcaaaga	actttatatt	tccagaaata	agttgatgac	tctaccagat	gcctccctct	30780
tacccatggt	actagtattg	aaaatcagta	ggaatgcaat	aactacgttt	tctaaggagc	30840
aacttgactc	atttcacaca	ctgaagactt	tggaagctgg	tggcaataac	ttcatttgct	30900
cctgtgaatt	cctctccttc	actcaggagc	agcaagcact	ggccaaagtc	ttgattgatt	30960
ggccagcaaa	ttacctgtgt	gactctccat	cccatgtgcg	tggccagcag	gttcaggatg	31020
tccgcctctc	ggtgtcgga	tgtcacagga	cagcactggg	gtctggcatg	tgtgtgtctc	31080
tgttctgtct	gactctgtct	acgggggtcc	tgtgccaccg	tttccatggc	ctgtggtata	31140
tgaaaatgat	gtgggcctgg	ctccaggcca	aaaggaagcc	caggaaagct	cccagcagga	31200
acatctgcta	tgatgcattt	gtttcttaca	gtgagcggga	tgccactactg	gtggagaacc	31260
ttatggtcca	ggagctggag	aacttcaatc	cccccttcaa	gttgtgtctt	cataagcggg	31320
acttcattcc	tggcaagtgg	atcattgaca	atatcattga	ctccattgaa	aagagccaca	31380
aaactgtctt	tgtgctttct	gaaaactttg	tgaagagtga	gtggtgcaag	tatgaactgg	31440
acttctccca	tttccgtctt	tttgatgaga	acaatgatgc	tgccattctc	attcttctgg	31500
agcccattga	gaaaaaagcc	attccccagc	gcttctgcaa	gctgcggaag	ataatgaaca	31560
ccaagaccta	cctggagtgg	cccatggacg	aggctcagcg	ggaaggattt	tgggtaaatc	31620
tgagagctgc	gataaagtcc	taggttccca	tatttaagac	cagtctttgt	ctagttggga	31680
tctttatgtc	actagttata	gttaagttca	ttcagacata	attatataaa	aactacgtgg	31740
atgtaccgtc	atttgaggac	ttgcttacta	aaactacaaa	acttcaaatt	ttgtctgggg	31800
tgtgttttta	taaacatatg	ccagatttaa	aaattgggtt	ttgggttttc	ttttttctat	31860
gagataacca	tgatcataag	tctattactg	atatctgaat	atagtccctt	ggtatccaag	31920
ggaattgggt	gcaggatcct	cgtggatatc	aaaattcata	gatgatcaag	tcccttataa	31980
gagtggcata	gtatttgcat	ataacctgtg	tacattctcc	tgtatacttt	aatcatctc	32040
tagattactt	atgataccca	atacaatgta	aatactatgt	aaatagttgt	actgtctttt	32100
tatttatatt	attattgtta	ttttttat	tcaaaat	taaaacatac	ttttgatcca	32160
cagttgggtg	acttcatgga	tgacagaacc	atggatatag	agggccaaact	gtaatctgta	32220
gcaactggct	tagttcatta	ggaaacagca	caaatgaact	taagattctc	aatgactgtg	32280

tcattctttc	ttcctgctaa	gagactcctc	tgtggccaca	aaaggcattc	tctgtcctac	32340
ctagctgtca	cttctctgtg	cagctgatct	caagagcaac	aaggcaaagt	at ttggggca	32400
ctccccaaaa	cttggtgcta	ttcctagaaa	aaagtgctgt	gtatttccta	ttaaacttta	32460
caggatgaga	aatactagag	ggtgtat ttt	catgtgatct	ggatctgtct	ttctggctat	32520
tagataggtt	tctccagcca	tagttacttg	agagagt gag	tacacagtgc	aaggtacagt	32580
aaattatgta	tttctgtaat	ttaacaaaat	aaatactcag	tttaggagaa	tttgaaagac	32640
acttcccaca	tccggactct	ggtcttcctc	agcctctaac	taccttttga	gttctagtta	32700
ttgtccaatc	actctgactc	tcagttcctg	tttttttagcc	tatatctcct	gcattctgtt	32760
gctttttcct	tcttcgaaaa	gtcttg tttt	taattctaaa	aaagcctgcc	ctttttcccc	32820
ttctgaatat	tttaaaaagt	acatgtgagc	taaatagatt	tttaagcaaa	tatataccta	32880
gagtttcctc	atcacacaac	cacacagcaa	ccccgcact	ccccctaccc	taaaccaaca	32940
aaaccttaca	acacacacag	atcacctcta	caacaacgac	tcatcaacac	ctcttttctc	33000
cataccacac	attcatcaca	aaatataaca	acaaaacaca	tcttattact	acctactctc	33060
ttcccctcaa	agtatatact	taaaaaccct	cctactcatt	atatacgatc	acaaagataa	33120
cgacacacat	cccataatcc	tacctaacca	gtaaccacac	atcg		33164